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EXAMINER

MILLER, BRANDON J

ART UNIT

PAPER NUMBER

2683

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/676,685

Applicant(s)

HAMADA, MASASHI

Examiner

Brandon J Miller

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 28 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 11-23, 26 and 27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 11-23, and 26-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2683

DETAILED ACTION

Response to Amendment

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 7, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alperovich and Borst.

Regarding claim 1 Alperovich teaches a wireless communication system having a wireless controller for controlling a wireless communication unit (see col. 3, lines 10-11 and FIG. 2). Alperovich teaches determining a situation within a wireless cell controlled by a wireless controller (see col. 3, lines 40-44). Alperovich also teaches deciding a charge rate for communication within a wireless cell, based on a situation determined and a threshold stored in a memory (see col. 3, lines 40-45 & 53-55 and col. 4, lines 21-24). Alperovich does not teach a threshold having a hysteresis characteristic. Alperovich does teach storing a threshold for changing a charge rate for communication within a wireless cell and a threshold value that indicates a level of channel utilization (see col. 3, lines 21-25 & 46-55). Borst teaches a hysteresis threshold to calculate signal measurement estimates to be used as cost values (see col. 11, lines 7-10, col. 13, lines 7-10, and col. 15, lines 55-58). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Alperovich threshold to

Art Unit: 2683

include hysteresis characteristics because this would allow for determination of a charge rate based on a desired threshold.

Regarding claim 2 Alperovich teaches determining the remaining amount of wireless resources within a wireless cell (see col. 3, lines 40-44).

Regarding claim 3 Alperovich teaches determining the traffic volume within a wireless cell (see col. 5, lines 44-48).

Regarding claim 4 Alperovich teaches transmitting a charge rate decision using an informing signal, which a wireless controller transmits regularly to a wireless communication unit (see col. 3, lines 52-60 and FIG. 3).

Regarding claim 7 Alperovich teaches a management unit for managing a plurality of wireless controllers (see col. 3, lines 7-12 and FIG. 2).

Regarding claim 23 Alperovich also teaches a wireless communications system having a wireless controller for controlling a wireless communication unit (see col. 3, lines 10-11 and FIG. 2). Alperovich teaches determining a situation within a wireless cell controlled by a wireless controller (see col. 3, lines 40-44). Alperovich teaches storing a threshold for changing a charge rate for communication within a wireless cell (see col. 3, lines 21-25 & 46-55). Alperovich also teaches deciding a charge rate for communication within a wireless cell, based on a situation determined and a threshold stored in a memory (see col. 3, lines 40-45 & 53-55 and col. 4, lines 21-24). Borst teaches a hysteresis threshold to calculate signal measurement estimates to be used as cost values (see col. 11, lines 7-10, col. 13, lines 7-10, and col. 15, lines 55-58).

Art Unit: 2683

Claims 11-13, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alperovich in view of Beddoes.

Regarding claim 11 Alperovich teaches a wireless communication system having a plurality of wireless controllers for controlling wireless communication units (see col. 3, lines 10-11 and FIG. 2). Alperovich teaches identifying a charge rate for communication within each wireless cell controlled by a plurality of wireless controllers (see col. 3, lines 41-50 and FIG. 2). Alperovich also teaches deciding a wireless controller to be connected to a wireless communication unit based on a charge rate, and a charge rate identifier, and controlling a connection to a wireless controller (see col. 4, lines 10-20 & 30-35). Alperovich does not teach a charge rate notified by both a charge rate of each wireless cell and a charge rate notified by a wireless communication unit. Beddoes teaches a charge rate notified by both a charge rate of each wireless cell and a charge rate notified by a wireless communication unit (see abstract, and col. 3, lines 3-11). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the invention adapt to include a charge rate notified by both a charge rate of each wireless cell and a charge rate notified by a wireless communication unit because this would allow for the identification of flexible charging rates through a communication network during an existing connection.

Regarding claim 12 Alperovich teaches deciding on one or more controllers to be connected to a wireless communication unit (see col. 4, lines 34-43).

Regarding claim 13 Alperovich teaches identifying a charge rate based on a situation within a wireless cell (see col. 3, lines 40-44).

Art Unit: 2683

Regarding claim 26 Alperovich teaches a wireless communication system having a plurality of wireless controllers for controlling wireless communication units (see col. 3, lines 10-11 and FIG. 2). Alperovich teaches identifying a charge rate for communication within each wireless cell controlled by a plurality of wireless controllers (see col. 3, lines 41-50 and FIG. 2). Alperovich also teaches deciding a wireless controller to be connected to a wireless communication unit based on a charge rate notified by a charge rate identifier and controlling a connection to a wireless controller (see col. 4, lines 10-15 & 30-35). Alperovich does not teach a charge rate notified by both a charge rate of each wireless cell and a charge rate notified by a wireless communication unit. Beddoes teaches a charge rate notified by both a charge rate of each wireless cell and a charge rate notified by a wireless communication unit (see abstract, and col. 3, lines 3-11). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the invention adapt to include a charge rate notified by both a charge rate of each wireless cell and a charge rate notified by a wireless communication unit because this would allow for the identification of flexible charging rates through a communication network during an existing connection.

Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alperovich in view of Borst and Rieken.

Regarding claim 5 Alperovich teaches transmitting a charge rate decision using a communication information signal transmitted from a wireless controller to a wireless communication unit (see col. 3, lines 52-60, FIG. 3). Alperovich does not teach transmitting a communication information signal while a wireless communication unit is communicating via a wireless controller. Rieken teaches transmitting a flexible rate charging information signal while

Art Unit: 2683

a wireless communication unit is communicating via a wireless controller (see col. 2, lines 23-27 and Fig. 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the Alperovich and Borst adapt to include transmitting a communication information signal while a wireless communication unit is communicating via a wireless controller because this would allow for flexible charging rates to be transmitted through a communication network while a connection exist.

Regarding claim 6 Alperovich teaches transmitting a charge rate added to accompanying control information included in a communication information signal (see col. 3, lines 55-60).

Claims 14-16, 19-22 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alperovich in view of Rieken.

Regarding claim 14 Alperovich teaches a wireless communication unit for making communication in accordance with a charge rate notified by a wireless controller (see col. 3, lines 66-67 and col. 4, lines 1-4). Alperovich teaches storing a charge rate at which a communication is permitted (see col. 4, lines 6-9). Alperovich teaches receiving, from a wireless controller information regarding a charge rate for communication within a wireless cell controlled by a wireless controller (see col. 3, lines 32-40 & 53-57). Alperovich also teaches providing a display based on a received, stored charge rate (see col. 5, lines 3-8). Alperovich does not teach a charge rate that is set by a user. Rieken teaches a charge rate that is set by a service user (see abstract and col. 2, lines 23-28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the Alperovich adapt to include a charge rate that is set by a user because this would allow for flexible charging rates to be transmitted through a communication network while existing an existing connection exist.

Art Unit: 2683

Regarding claim 15 Alperovich teaches displaying a charge rate when a charge rate received exceeds a charge rate stored in a memory (see col. 4, lines 22-24 and col. 5, lines 6-8).

Regarding claim 16 Alperovich teaches a device as recited in claim 15 and is rejected given the same reasoning as above.

Regarding claim 19 Alperovich teaches receiving a charge rate using an informing signal that is transmitted regularly to a wireless communication unit (see col. 3, lines 52-60 and FIG. 3).

Regarding claim 20 Alperovich teaches receiving a charge rate using a communication information signal transmitted from a wireless controller to a wireless communication unit (see col. 3, lines 41-44 & 52-60 and FIG. 3). Rieken teaches transmitting a flexible rate charging information signal while a wireless communication unit is communicating via a wireless controller (see col. 2, lines 23-27 and Fig. 2).

Regarding claim 21 Alperovich and Rieken teach a device as recited in claim 6 and is rejected given the same reasoning as above.

Regarding claim 22 Alperovich teaches a device as recited in claim 13 and is rejected given the same reasoning as above.

Regarding claim 27 Alperovich teaches a wireless communication unit for making communication in accordance with a charge rate notified by a wireless controller (see col. 3, lines 66-67 and col. 4, lines 1-4). Alperovich teaches storing a charge rate at which a communication is permitted (see col. 4, lines 6-9). Alperovich teaches receiving, from a wireless controller information regarding a charge rate for communication within a wireless cell controlled by a wireless controller (see col. 3, lines 32-40 & 53-57). Alperovich also teaches providing a display based on a received, stored charge rate (see col. 5, lines 3-8). Alperovich

Art Unit: 2683

does not teach a charge rate that is set by a user. Rieken teaches a charge rate that is set by a service user (see abstract and col. 2, lines 23-28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the Alperovich adapt to include a charge rate that is set by a user because this would allow for flexible charging rates to be transmitted through a communication network while a connection exist.

Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alperovich in view of Reiken and Hillis.

Regarding claim 17 Alperovich and Reiken teaches a device as recited in claim 14 except for communication of a wireless communication unit that is inhibited when a charge rate received exceeds a charge rate stored in memory. Hillis teaches a user inhibiting communication of a wireless communication unit when a charge rate is received exceeds a charge rate stored (see col. 3, lines 65-68 & col. 4, lines 1-3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the Alperovich adapt to include communication of a wireless communication unit that is inhibited when a charge rate received exceeds a charge rate stored in memory because this would allow for a user to respond to the transmission of real time information concerning the charge rate of a communication service.

Regarding claim 18 Hillis teaches communication that is compulsorily enabled by performing a predetermined operation of a wireless communication unit even when communication is inhibited (see col. 4, lines 4-9).

Response to Arguments

Applicant's arguments with respect to claim 11, 14 and 26-27 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 2683

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Korpela U.S Patent No. 6,311,054 discloses a method to determine charging information in a mobile telecommunications system and a mobile station.

Kaku European Patent Publication No. 0 920 177 A2 discloses a charging method and system for radio communication.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon J Miller whose telephone number is 703-305-4222. The examiner can normally be reached on Mon.-Fri. 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 703-308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

April 27, 2003


WILLIAM TROST
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